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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,035	02/17/2005	Grant Berent Jacobsen	01435.0209-00000	3499

22852 7590 12/18/2006  
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EXAMINER
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LEE, RIP A

ART UNIT	PAPER NUMBER
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1713

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/18/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/525,035

Applicant(s)

JACOBSEN ET AL.

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on November 15, 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4,6,7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4,6,7,9-11 and 14-18 is/are rejected.
- 7) ☒ Claim(s) 12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This office action follows Applicant's request of November 15, 2006 for withdrawal of final office action of September 22, 2006. The finality of prosecution was made prematurely, and therefore, the finality has been withdrawn. This office action supersedes the previous office action. Claims 1-4, 6, 7, 9-18 are pending.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-4, 6, 7, 9-11, and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andell *et al.* (U.S. 6,225,423).

Andell *et al.* discloses a process for preparing supported metallocene catalysts. As explained by the inventors, the invention is an extension of a known process used in Ziegler Natta polymerization. The catalyst is impregnated with olefin before it is fed into the reactor to provide a more controlled initial activity for the catalyst system, thereby preventing uncontrolled local exothermic polymerization reactions (col. 2, lines 20-30). The critical step of the invention is contacting a transition metal compound with 0.05-500 moles of an unsaturated

organic compound (*i.e.*, alkene) and recovering this mixture (claim 1). Use of organoaluminum is optional (col. 9, line 6), and the reaction product of transition metal and organic compound, and possibly the organoaluminum, is impregnated into a solid carrier (col. 10, lines 3-6). In the recovery step, the reaction product of transition metal compound and unsaturated organic compound is recovered by contacted with solid support to give a solid contacting product (claim 14). In such an instance, one having ordinary skill in the art would have found it obvious to activate the components using the organoaluminum in a subsequent step in order to obtain an active polymerization catalyst. While the working examples do not show an embodiment in which follows the process recited in the claims, it would have been obvious to one having ordinary skill in the art to make such a catalyst, and thereby arrive at the subject matter of instant claim 1, because this process is expressly disclosed Andell *et al.* Moreover, it has been held that the selection of any order of performing steps is *prima facie* obvious in absence of new or unexpected results (specification is devoid of any showing of unexpected results arising from order of addition of reagents). *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930).


The subject matter of the remaining claims is obvious over the teachings of Andell *et al.* The transition metal compound is a standard *bisCp* type of metallocene (column 8) or a constrained geometry type of metallocene (col. 8, line 67, WO 95/14044 incorporated by reference). The unsaturated compound is 1-hexene, vinyl cyclohexane, and vinyl trimethylsilane (examples). Where, 1-hexene is used, the resultant polymer is an ethylene-hexene copolymer (col. 14, line 18). Catalysts of the invention are amenable for solution, suspension, or gas phase polymerizations (col. 12, lines 18-22).

4. Claims 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 1713

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).



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December 12, 2006